UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/858,096	05/15/2001	Satoshi Deishi	15162/03630	2717

24367   7590   08/11/2004

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EXAMINER
AMINI, JAVID A

ART UNIT	PAPER NUMBER
2672	13

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *6,11 and 14* is/are allowed.

6)☒ Claim(s) *1-5,7-9,13,17 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☒ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on May 13, 2004 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1-5, 7-9, 13, 17 and 18 have been

considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

1.   Claims 6, 11 and 14 are allowed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-5, 7-9, 13, 17 and 18 rejected under 35 U.S.C. 103(a) as being unpatentable

over Usami et al. (hereinafter referred as Usami), and further in view of Ellson et al. (hereinafter

referred as Ellson).

2.   Claims 1, 3 and 13.

"A color correction method of correcting image data prepared for a first apparatus having a first

Gamut for reproduction on a second apparatus having a second Gamut, said color correction

method comprising the steps of:" Usami in abstract teaches the steps (claim language) in

preamble, see following extracted from abstract: Usami's invention has as an object providing a

color transforming method by which transformation can be effected easily making maximum

use of the reproduction range and without causing any distortions in a color space while

maintaining color and gradation balances between different conditions (of device, medium or

reproducing condition) in different ranges of color reproduction. "shifting each color of said

image data in the same direction as a direction from a gray axis of said first Gamut towards a

gray axis of said second Gamut, by an amount corresponding to a distance of said color from

the gray axis of said first Gamut in a chroma direction, and wherein a position of each color

along said gray axis is maintained when said color is shifted.", As applicant claim's language

specifies shifting each color of image (i.e. C, M, Y are color image and shifted them according

to the gray balance). Usami does not explicitly illustrate the claim language (shifting each color

of image). However, Usami in figs. 2 illustrates an exemplary graph plotting the equivalent

neutral (gray) ink value (DOT %) against luminance Y and lightness L. Conversely, Ellson in

fig. 5B illustrates a line constraint. This could be used to constrain a shadow or highlight a

series for a particular colored surface, or to constrain colors on the neutral (gray) axis, etc.

Ellson in fig. 8 clearly illustrates the shifting color of image (nearest color) according to the

neutral or gray axis. Thus, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to incorporate the teaching of Ellson into Usami in order to modify

the Usami's invention by adding additional method (a method for mapping colors in one color

space to colors in another color space) that Ellson introduced. Usami has two printing

conditions (i.e. a computer with a display connected to a printer), and a person skilled in the art

would be interested to attain by a color transforming method, which performs color correction between reproduced images under different conditions. Alternatively, by integrating the configuration in fig. 4 of Ellson into the configuration of fig. 1 of Usami for conditions A and B, would have been advantageous to users.

3.   Claim 2.

"The color correction method according to claim 1, further comprising the steps of compressing the shifted colors in directions of lightness and chroma, and pasting said compressed colors that do not come into said second Gamut to a surface of said second Gamut", examiner's interpretation: the meaning of terms lightness and chroma are similar, the synonym is the term intensity. Usami in col. 9 lines 46-56 teaches the overall gradation is compressed and mapping is effected centering on the compressed gradation and, in addition, transformation is effected within the range of device data, thereby ensuring that the reproduced gradations will not go beyond the intended gamut with non-gray colors being transformed naturally while preserving their positions relative to the central gray. See also Ellson in col. 2, lines 13-16.

4.   Claim 4.

"The color correction method according to claim 1, wherein said shifting step shifts said colors of image data so that the gray axis of said first Gamut matches the gray axis of said second Gamut", The step is obvious because Ellson in fig. 11 illustrates the claim language image data (input color item 10) and second Gamut (items 12, 14 and 16) and also see the direction of gray axis.

5.   Claim 5.

"The color correction there according to claim 1, wherein said shifting step shifts said colors of

data so that the gray axis of said first Gamut is shifted to a position not completely matching the

gray axis of said second Gamut", The step is obvious because Ellson in fig. 8 illustrates the

nearest colors. The input color space (first Gamut) would be shifted to a position nearest or

second-nearest colors to match the gray axis of output color space (second Gamut).

6.   Claim 7.

"The color correction method according to claim 1, wherein said shifting step sets a white point

of said first Gamut to coincide with the white point of said second Gamut", The step is obvious

because Ellson in fig. 6 item 50 teaches the initial conditions, and a white point can be set as a

initial condition.

7.   Claims 8, 9, 17 and 18

Ellson in fig. 8 illustrates that given analytical densities of c, m and y (colors) under a certain

condition, only one set of densities that provide a gray balance exists at any point (this

relationship may be described as "linear independency") and the combination of such densities

is represented by END. Usami in col. 5 lines 4-8 teaches the step of predicting and calculating a

colorimetric color space (e.g. Lab or XYZ space) representing colorimetric color reproducing

characteristics from printing device data CMYK under two printing conditions A and B.

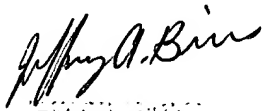8.   Claim 10, 12 15-16 and 19 are cancelled.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini

JEFFER... ....
PRIMARY EXAMINER